AUTHOR INDEX

Achor, Diann S. 14
Aloni, Roni 348, S90
Ashworth, Edward N. 311
Asthana, A. 442
Axelius, Barbro 488
Axtell, John D. 311
Bachmann, K. 89
Baird, James H. 320
Banerjee, S. 333
Bashaw, E. C. 466
Baskin, Carol C. 239, 565
Baskin, Jerry M. 239, 565
Beebe, Dwight U. 61
Bell, Peter R. S123
Boag, T. S. 503
Bohm, L. R. 333
Briggs, C. L. 40
Burns, Jacqueline K. 14
Burrows, G. E. 503
Burson, Byron L. 244
Callaway, Ragan M. 434
Cantrill, David J. 622
Cass, David D. 186
Charvat, I. 541
Chester, Edward W. 565
Conner, A. J. 550
Cook, E. R. 117
Cooke, Todd J. S7
Day, Alan W. 531
de Laubenfels, David J. (no. 4) vii
Delesalle, Veronique A. 108
Dengler, Nancy G. S93
DeWit, Luke 556
Dickens, Ray 320
Dommisse, E. M. 550
Dute, Roland R. 320
Echeverria, Ed 14
El-Kassaby, Y. A. 333
Endress, Peter K. S106
Evert, Ray F. 61 (no. 3, pt. 2) v
Findlay, Teresa A. Schoneman 31
Fisher, Jack B. S137
Ford, E. David S147
Garber, E. D. 98
Green, Paul B. S59
Guitián, Javier 409
Hagemann, Wolfgang S38
Hallett, Ian C. 49
Harrison, Lionel G. S76
Harrison, D. L. S. 171
Heath, Michèle C. S182
Hebbert, Naomi 513
Henry, Leslie Tolley 178
Hignight, K. W. 466
Hirsch, Ann M. S171
Hoffman, George R. 239
Holsinger, Kent E. (no. 3, pt. 1) iii
Horst, R. K. 197
Huang, Bingru S163
Hufford, Larry 217
Hussey, M. A. 466
Imaichi, R. 212
Ishida, Kyoko 155
Israel, H. W. 197
Jenks, Matthew A. 311
Jenner, C. F. 413
Johnson, Hyrum B. 453
Johnson, Norma G. 646
Johnson, Robert A. 400
Kaplan, Donald R. S28
Kato, M. 212
Katsumi, Masayuki 155
Kaufman, Peter B. 164
Kelly, P. E. 117
Kim, Donghern 164
Kimbrough, James W. 128
Kirchoff, Bruce K. 471
Klekowski, Edward J., Jr. 394, 462
Ko, Helen 589
Koh, Calvin Kok-Keng 329
Lajtha, Kate 425
Lanner, Ronald M. 250
Larson, D. W. 117
Lev-Yadun, Simcha 348
Lis, Richard A. 258
Lloyd, David G. 358, 370, 381
Löbler, Marian S171
Lowenfeld, Robin 394
Lu, Bin S7
Lu, Casey R. 164
McGovern, R. J. 197
McKhann, Heather I. S171
MacRae, Elspeth A. 49
Mauthe, S. 89
Mayeux, Herman S. 453
Maze, J. 333, 529
Meier, R. 541
Mellerowicz, E. J. 26
Miller, Charles N., Jr. 147
Mims, Charles W. 289
Miner, Gordon S. 78
Nelson, Timothy S93
Newman, S. Winnell H. 471
Nobel, Park S. 102, S163
Ong, Bee-Lian 329
Orr, Alan R. 31
Owens, J. N. 171
Padien, Daniel J. 425
Pattee, Harold E. 341
Peters, Paul J. 311
Phillips, Arthur M. III 250
Platt, K. A. 301
Polley, H. Wayne 453
Raper, C. David, Jr. 78, 178
Reid, David M. 556
Rich, Patrick J. 311
Richardson, Elizabeth A. 289
Rideout, James W. 78, 178
Riding, R. T. 26
Rieseburg, Loren H. (no. 1) v
Ristic, Zoran 186
Rothwell, Gar W. 602
Ruddat, M. 98
Sánchez, Jose María 409
Schoen, Daniel J. 358, 381
Scribailo, R. W. 1
Seagull, Robert W. (no. 2) iii
Sedgley, M. 413
Serbet, Rudolph 602
Silk, Wendy Kuhn S49
Singh, Sangeeta 205
Sitte, Peter S1
Snetselaar, Karen M. 289
Stalker, H. Thomas 341
Stockey, Ruth A. 136, 503, 589
Sun, Fusheng 136
Tepper, Herbert B. 230
Thompson-Coffe, Catherine 31
Thomson, W. W. 301
Tidwell, William D. 513
Tomlinson, P. B. 1, 572
Trivett, Mary Louise 273
Tuveson, R. W. 442
Ungar, Irwin A. 421
van Houten, W. H. J. 89
Verbeke, Judith A. S86
Vlot, E. C. 89
Wagner, Brett A. 31
Walles, Björn 205
Wee, Yeow-Chin 329
Wegrzyn, Teresa F. 49
Woltz, Philippe 589
Wu, Chi-Guang 128
Wunnachit, W. 413
Xu, Jianhua 531

SUBJECT INDEX

A

Abies amabalis 147
Abies balsamea 26
Abortion 341
Abscisic acid 155
Abscisic acid, endogenous 186
Abscission 556
Acetabularia S1, S76
Acnistus 488
Acrostichum aureum S38
Actinidia deliciosa 49
Adiantum raddianum S38
Adventitious bud 320
Adventitious root 320
Afterripening 239
Agave deserti 102, S163
Agrobacterium sp. 550, S171
Ailanthus altissima 348
Albinism 394, 462
Algae S7, S76
Anabaena catenula S76
Anacardium occidentale 413
Anagallis arvensis S59
Anatomy S38
Anatomy, root S163
Andromonoecy 413
Anemia S28
Anisoclady 230
Anogramme leptophylla S38
Antirrhinum majus S59, S106
Apical meristem 78
Apodanthera undulata 108
Apogamy S123
Apomixis, faculative 466
Apospory 466, S123
Arabidopsis thaliana S7, S106
Arachis 341
Araucaria actifoliatus 622
Araucaria bidwillii 503
Araucaria carinatus 622
Araucaria falcatus 622
Araucaria lanceolatus 622
Araucaria otwayensis 622
Araucaria seorsum 622
Araucarian foliage 622
Arthropodium cirratum 550
Ascospore ontogeny 128
Asplenium aethiopicum S123
Asplenium sensibilis S7
Athenea 488
Avena sativa 164, 453
Avocado. *See* Persea americana

B

Bacterial-induced changes S171
Bergenia crassifolia S38
Besseya 217
Betulaceae 136
Biochemistry, idioblast oil cell 301
Biomechanics S7, S59
Bitelaria 646
Botrydium S1
Branch abscission 556
Brassica kaber 453
Brassicaceae flowers S106
Broad-leaved variant 212
Bromus tectorum S93
Brusselator S76
Buckling, shoot pattern formation S59

C

C_3 species 453
C_4 tissue differentiation S93
Calla palustris 1
Capparaceae flowers S106
Capparis spinosa S106
Carbohydrates 178
Cardamine pratensis S106
Carpellary outgrowth 14
Catharanthus roseus S86
Caulerpa prolifera S38
Caulerpa floridana S38
Cell elongation (no. 2) iii
Cell packing 49
Cell shape regulation S7
Cell solute concentration 61
Cell theory S1, S28, S38
Cell wall morphology 329
Cell wall ultrastructure 49, 164
Cell–cell communication S86, 531
Cellulose synthesis 164
Central cavity 14
Central cell 40
Cercocarpus 258
Chamaesaracha 488
Chemical mutagenesis 311
Chlorophyll deficiency 462
Chlorophyll-deficient mutations 394
Chloroplast structure 186
Chromosomes 244
Chrysanthemum phloem necrosis 197
Citrus paradisi 14
Cladistic analysis 273
Cleome spinosa S106
Cleome violacea S106
CO_2 concentration, subambient 453
Codium S1
Cold stratification 239
Coleochaete scutata S7
Competition 421
Computer simulation, tree architecture S137
Cone development (no. 4) vii, 572
Cone production 171
Conifer, rainforest 503
Control of vascular differentiation S90
Cordaixylon iowensis nov. comb. 273
Cordyline australis 550
Coryleae 136
Costaceae 471
Crassula argentea S7
Cretaceous, Lower 513, 622
Cross-fertilization 358, 370, 381
Cryptogeal germination 503
Cucumis sativus 155
Cuticle micromorphology 589, 622
Cuticular epithelium, Bitelaria 646

D

Dactylaena micrantha S106
Dendranthema grandiflora 197
Dendrochronology 108
Desert succulents, changes in root structure S163
Development: apospory and apogamy S123; Arachis embryo

341; Calla palustris 1; cell–cell communication S86; computer simulations S137; cucumber hypocotyl cells 155; DNA endoreduplication 26; floral S59, S102; grapefruit juice vesicle 14; gravistimulated oat pulvini 164; hormonal regulation (no. 2) iii; hypocotyl cells 155; maize ear 31; molecular and cellular basis of pattern formation (book review) 529; morphological integration 333; pathogen-induced changes S163, S182; photosynthetic tissue S93; planar structures S7; Podocarpaceae cone 572; reaction-diffusion theory S76; relationship of cells and organism S1, S28, S38; steady form S49; tree structure and productivity S147; Tsuga heterophylla cone production 171; vascular differentiation 348, S90
Developmental genetics (no. 1) v, 89, 333
Devonian, Early 646
Devonian, Upper 602
Differentiation 348, S86, S90, S93
Diodia virginiana 320
Dioscorea bulbifera 550
Discomycetes 128
DNA endoreduplication 26
Dormancy, morphophysiological 565
Douglas fir. *See* Pseudotsuga menziesii
Drought tolerance 311
Dry matter allocation 178
Dryopteris affinis S123

E

Echinacea angustifolia 239
Echinomastus erectrocentrus 400
Ecology: Agave deserti 102; Apodanthera undulata 108; California oak spp. 434; Echinacea angustifolia 239; pinyon-juniper woodland 425; Spergularia marina 421; Thuja occidentalis 117
Ecology. *See* Reproductive ecology
Ecophysiology 434
Egg apparatus 40
Elevational gradient 425
Elkinsia polymorpha 602
Embryo growth, Thaspium pinnatifidum 565
Embryology 40, 341
Environmental productivity index 102
Enzyme-etching, seed coat 488
Epicuticular wax 311
Epimatium 572
Epispore wall deposition 128
Esau, Katherine, contributions of Sv
Escherichia coli 442
Evolution: floral diversity S106; floral morphology (no. 1) v, 89, 217; mating system (no. 3, pt. 1) iii; plant life cycle S123; self- and cross-fertilization 358, 370, 381
Exodeconus 488
Extrafloral nectary 413

F

Facilitation 434
Fagus sylvatica S147
Falcatifolium 589
Fern gametophyte morphogenesis S7
Ferocactus acanthodes S163
Fimbriae, Ustilago maydis 531
Floral development 1, 31, 78, 205, 217, 471, S59, S106
Floral diversity S106
Floral sex expression 108
Floral transition 78
Flower production 400
Flowering phenology 409
Foliar spray, gibberellin 171
Fossombronia tuberifera S38
Fruit set 400, 409
Fungal-plant interface, ultrastructure S182
Fungi: Fusarium oxysporum S182; Fusarium sp. 442; Glomus mosseae 541; Mycolachnea hemisphaerica 128; Penicillium sp. 442; Ustilago scabiosae 98; Ustilago striiformis 289

G

Gas exchange 434
Gender allocation 108
Genetics: Microseris 89; mutation rates 462; Paspalum sp. 244; Pennisetum sp. 466; pinyon pines 250; Ustilago scabiosae 98
Genome size 26
Genomes, Paspalum 244
Geometry, cell shape S7
Germination: Araucaria bidwillii 503; Echinacea angustifolia 239; Thaspium pinnatifidum 565
Germination method, fungal spore 541
Gibberellin 155, 171, 565
Ginkgo biloba S28
Glomus mosseae 541
Glucan synthase activity 164
Glycine max 178
Graviresponse 164
Growth S49
Growth architecture 273, S137, S147
Gynoecium, Costaceae 471

H

Helianthus annuus S59
Histochemistry, idioblast oil cell 301
Hormonal regulation (no. 2) iii
Host-pathogen interaction 197, 289, S171, S182
Hybridization: interspecific abortion 341; Microseris 89; n + n and 2n + n 466; natural 250; Paspalum 244
Hymenophyllum S38
Hypocotyl elongation 155

I

Idioblast oil cell 301
Immunofluorescence microscopy 155
Inbreeding 394, 462
Induction S86
Insect vectors 400
Integration, morphological 333
Interspecific hybridization 89, 244, 250, 341, 466
Intracellular differentiation S76
Intraspecific competition 421
Introgression 250
Isolation, idioblast oil cell 301

J

Jaborosa 488
Jacaranda mimosifolia S106
Jaltomata 488
Juniperus monosperma 425

K

Kiwifruit. *See* Actinidia deliciosa

L

Laminaria S7
Leaf architecture 258
Leaf area, effect of subambient CO_2 453
Leaf minor veins 61
Lepidium graminifolium S106
Lepidium virginicum S106

Life cycle, plant S123
Lilium regale 205
Lindernia crustacea S106
Lipid 14

M

Magnaporthe grisea S182
Margaranthus 488
Mating system (no. 3, pt. 1) iii, 358, 370, 381, 394, 462
Maurandya erubescens S106
Medicago sativa S171
Meristem structure S59
Micrasterias S76
Microbial alteration of plant development S171, S182
Microbotryum violaceum 531
Microseris bigelovii 89
Microseris douglasii 89
Microspectrophotometry 26
Microtubule orientation (no. 2) iii, 155
Minimal energy configuration S59
Mnium cuspidatum S7
Modes of selfing 381
Monocotyledons, hosts for Agrobacterium 550
Monoecious species 108
Monstera deliciosa 550
Moricandia arvensis 61
Morphogenesis S1, S7, S28, S38, S59, S76, S90
Morphological integration 333
Morphology 108, 230
Morphology, tree S137, S147
Multicellular algae S7
Multicellularity S28
Mutation rates 462
Mycoplasma 197
Mycorrhizal spores 541
Myolachnea hemisphaerica 128

N

Nectary: Anacardium occidentale 413, Costaceae 471
Neogene 147
Nerine bowdenii 550
Net assimilation 453
Nicotiana tabacum 78, S7
Nitrogen allocation 178
Nitrogen stress 78
Nutrient diversion 78

O

Oceanopapaver neocaledonicum S106
Oil gland development 14
Onoclea sensibilis S7
Open organization S38
Opines 550
Organismal theory S1, S28, S38
Oryctes 488
Osmiophilic material 14
Ovary structure, Costaceae 471
Ovule, Podocarpaceae 572

P

Palaeocarpinus 136
Paleobotany: Araucarian foliage 622; Bitelaria cuticle 646; Cordaixylon iowensis 273; Elkinsia polymorpha 602; Palaeocarpinus 136; Pinus cones 147; Tempskya 513
Paleocene 136
Paleoecology 513
Pallavicinia lyelli S7
Panicum bulbosum S93
Panicum effusum S93
Pappus parts 89
Parasexual cycle 98
Paspalum 244
Pattern formation S1, S76
Pattern formation (book review) 529
Pattern formation in shoots S59
Peanut. *See* Arachis
Pellia epiphylla S38
Penicillium sp. 442
Pennisetum 466
Penstemon hartwegii S106
Permineralized seed cones 147
Persea americana 301
Petrocoptis grandiflora 409
Petunia S59
Phaseolus vulgaris S182
Phaseum cuspidatum S123
Phloem loading 61
Phloem necrosis 197
Photoassimilate pathway 61
Photosynthesis 178, 434
Photosynthetic tissue differentiation S93
Phototoxins 442
Phylogenetic surroundings of Arabidopsis and Antirrhinum S106
Physalis 488
Physiology: Agrobacterium 550; branch abscission 556; floral transition 78; growth S49; nitrogen stress 178; photoassimilate pathway(s) 61; phototoxins 442; seed germination 565; subambient CO_2 453; tree S147; water and high temperature stress 186
Picea S147
Pinus 147, 250, S147
Pinus edulis 425
Pinus halepensis 348
Pinyon-juniper woodlands 425
Placenta 205
Plant reconstruction 602
Plant spatial pattern 425
Plant-fungal interface S182
Plasmodesmatal frequency 61
Platanus occidentalis S137
Plumbago zeylanica S28
Poa pratensis, Ustilago striiformis-infected, ultrastructure 289
Podandrogyne brachycarpa S106
Podocarpaceae (no. 4) vii, 572
Podocarpaceae, cuticle micromorphology 589
Podocarpus macrophyllus S7
Polanisia dodecandra S106
Pollination 400, 413
Polygonal arrays S7
Polygonatum ×hybridum 550
Polygonum S28
Populus S137
Populus balsamifera 556
Porella pinata S7
Porphyra S7
Positional signaling S86, S93
Postharvest ripening 49
Protein complement 31
Pseudogamy 466
Pseudotsuga menziesii 333
Pteris cretica S123
Pyrrosia piloselloides 329

Q

Quantitative genetics 333
Quercus 434

R

Ranunculus auricomus S123
Reaction-diffusion theory S76
Reproductive ecology and evolution: Agave deserti 102; An-

acardium occidentale 413; Apodanthera undulata 108; Echinomastus erectrocentrus 400; Petrocoptis grandiflora 409; Rhizophora mangle 394; self- and cross-fertilization 358, 370, 381
Rheophyte 212
Rhizobium S171
Rhizophora mangle 394
Ribes S59
Ritchiea capparoides S106
Root hydraulic conductivity and anatomy S163

S

Saintpaulia ionantha S106
Scanning electron microscopy 488
Scanning electron microscopy: Araucarian foliage 622; Besseya and Synthyris floral structure 217; Brassicaceae, Capparaceae flowers S106; Calla palustris floral development 1, epicuticular wax 311; Falcatifolium cuticles 589; Podocarpaceae cone morphology 572; Pyrrosia piloselloides cell wall 329; seed coat morphology 488
Secretion zone 205
Seed cones 147
Seed dormancy 239
Seed fern 602
Selaginella martensii S7
Selection 381
Self-fertilization 358, 370, 381
Shade 434
Shoot development 1
Shoot initiation 230
Shorea leprosula S137
Shorea stenoptera S137
Signal flows S90
Simulation of tree architecture S137
Soil analysis 425
Solanum 488
Solanum nigrum 40
Sorghum bicolor 311
Spatial analysis 425
Spergularia marina 421
Spore delimiting membranes 128
Stage-associated polypeptides 31
Steady form S49
Stellaria media 230
Stem injection, gibberellin 171
Stenophyll 212
Stomatal conductance 453
Stratification 565
Stress: nitrogen 78, 178; temperature and water 186, S49; water 329
Structure: avocado idioblast oil cell 301; Besseya, Synthyris 217; Costaceae ovary structure 471; Diodia virginiana 320; Epicuticular wax 311; kiwifruit cell wall 49; Lilium regale transmitting tissue 205; Physalis testa 488; Podocarpaceae cones 572; Pyrossia piloselloides cell wall 329; Solanum nigrum mature central cell and egg apparatus 40; Stellaria media shoot 230; Tectaria lobbii 212; Ustilago striiformis 289
Synthyris 217
Systematics: Arabidopsis, Antirrhinum S106; Araucaria 503; Besseya, Synthyris 217; Cercocarpus 248; Costaceae 471; Falcatifolium 589; Humariaceae 128; Physalis 488; Podocarpaceae 572

T

Tabernaemontana S137
Taxodium S147
Tectaria lobbii 212
Teliospore maturation, Ustilago striiformis 289
Tempskya 513
Terminalia S137
Testa structures 488
Thuja occidentalis 117
Thunbergia alata S106
Tip growth, branching S76
Tissue differentiation S86
Tradescantia virginiana S7
Transfer cell 205
Transmitting tissue 205
Tree architecture S137
Tree productivity, structure S147
Tsuga heterophylla 171
Turing morphogen S76
Two-dimensional electrophoresis 31

U

Ultrastructure: avocado idioblast oil cell 301; chloroplast 186; chrysanthemum phloem 197; Glomus mosseae spores 541; grapefruit juice vesicle 14; gravistimulated oat pulvini 164; kiwifruit cell wall 49; Moricandia arvensis leaf 61; Mycolachnea hemisphaerica 128; plant-fungal interface S182; Solanum nigrum embryo 40; Ustilago maydis fimbriae 531; Ustilago striiformis 289
Ultraviolet light 442
Ulva S7
Uromyces appeniculatus S182
Uromyces vignae S182
Ustilago maydis 531
Ustilago scabiosae 98
Ustilago striiformis 289

V

Vascular cambium 26
Vascular differentiation 26, S90
Vascular rays, differentiation 348
Vaucheria S1
Vegetative reproduction, Diodia virginiana 320
Vella spinosa S106
Vesicular-arbuscular mycorrhizal fungi 513
Vigna unguiculata S182
Vinca major S59

W

Wall ingrowths 40
Wind, influence on branch abscission 556
Withania 488
Wounding response 348

Z

Zantedeschia aethiopica 550
Zea mays 31, 186, S49, S93
Zebrina pendula S7
Zelkova S137